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## ABSTRACTS

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## TRANSACTIONS published in JAPANESE

(Pages refer to the Japanese originals of this volume unless otherwise noted.)

### Über die Soyabohneneiweißstoffe. II. Mitteilung.

Veränderungen der Gehaltsverhältnisse von Eiweissarten durch die verschiedene Behandlung der Bohnen.

(SS. 129～135)

Von Kunihiko SUMINOKURA.

(Biochemisches Institut der Tottori Landwirtschaftlichen Hochschule, Tottori:
Eingegangen am 11. 12. 1941.)

### Studien über die Fixierung des Sericin. I. Mitteilung.

(SS. 136～142)

Von Z. HIROSE.

(Aus dem Institut für Seidenbau der Aktiengesellschaft Gunze-Seisi zu Ayabe, Kyoto-hu:
Eingegangen am 26. 11. 1941.)

Wir haben folgende Ergebnisse gehabt:

Preßt man vollständig Rohseiden, die mit einer Pufferlösung von pH 1,2～2,5 behandelt wurden, bis zu zirka 40% Lösungsgewicht des Puffers und behandelt sie darauf mit Formaldehydgas von über 60°C., so verbindet sich das Formaldehyd mit den OH-Gruppen des Sericin.

Die Wasserstabilität der so erhaltenen Sericin-Formaldehyd-Verbindung war grösser als diejenige von Mustern, welche auf einer anderen Methode der Formaldehydfixierung beruht. Es versteht sich, daß Sericin an Oxyaminosäure und Monoaminodicarbonsäure reich ist.

### The Dehydration of 2, 3-Butylenglycol.

(pp. 143～150)

By K. ŌHARA and S. FURUHASI.

(Agr. Chem. Laboratory, Faculty of Agr., Tokyo Imperial University;
Received December 8, 1941.)

## On the Form of Sulphur in Soy-bean Protein.



By Shigeki Mori.

(Kondō Laboratory, Institute for Chemistry, Kyoto Imperial University;
Received November 12, 1941.)

## On the Additive Reaction of Sodiumbisulphite with Crotonaldehyde.



By M. Hori.

(Central Research Institute, Japanese Government Monopoly Bureau;
Received December 14, 1940.)

## On the Chemical Studies of the Baggasse Pulp. (8～9).



By T. Tadokoro and M. Nishida.

(Hokkaido Imperial University; Received October 31, 1941.)

## Function Studies on Soils. (53～58).



By Misu-Hideo.

(Agricultural Experiment Station, Government of Tyōsen;
Received September 12, 1941.)

## Study of the Insecticidal Principle in the Smoke Produced by Combusting Insect Powder. (Part VIII.)



By Makoto Nagase.

(Agricultural Chemical Department, Taihoku Imperial University, Taiwan;
Received October 30, 1941.)

## On the Amount of Solar Ultra Violet Rays.

Special relation between the variations of solar ultra violet rays and the types of weathers.



By Torataro Hanzawa.

(Agricultural Chemical Laboratory, Hokkaido Imperial University;
Received December 4, 1941.)

The intensity of ultra violet rays reaching the surface of the earth was determined by the molybdic method which was formerly devised and published by the author[1].

The constant value, which means the total amount of ultra violet rays rea-

ching the outer atmosphere of the earth at the time of ideal altitude, i. e., 90° of sun, was computed by means of the least square method using the numerical values obtained by actual measurements. When expressed in quantity as hydrogen for the unit area per square centimeter per minute, constant value is $1.2980 \times 10^{-5}$ g.

The following empirical formula was deduced from the above eonstant and the results of determinations of ultra violet rays.

$$\log M_0 = \log K - \alpha . \operatorname{cosec} \theta + \log \sin \theta - 2 . \log r$$

In this formula, $M_0$ is the actual value calculated to the standard semidiameter of the sun from the measured ultra violet intensity $M$, $K$ is the constant (1.2980), $\alpha$ is the extinction coefficient, $r$ is the ratio of the distance from the sun to the earth, and $\theta$ is the solar altitude whose value can be calculated by the ordinary method.

By the application of the formula, the values of the extinction coefficients at any time and day may be easily calculated. After a set of actual measurements on clear days of absolute cloudlessness, but not calm, with rather a gentle wind in velocity of a few meters of E. S. S., and calculations by means of the formula, it was found that there are special relations between the variations of extinction coefficients and weather types.

The extinction coefficients found during severals days in the early spring of the year 1932 were comparatively small, but rather a little larger at the period of a little before noon than in the morning. In the year 1933, on the contrary, they appeared much larger in general, but smaller at the noon period than in the morning, showing a good tendency of decreasing towards noon.

The author[2] proposes a hypothesis that if the values and variations of extinction coefficients will appear as in the year 1932, there may be expected a type of weather producing poor harvests of some kinds of agricultural crops, but when they are as in the year 1933, the comming weather type is considered to be suitable for good growth of plants such as rice.

This hypothesis, of course, contains many uncertainties and it should be ascertained by experimental observations of plant growth and the actual determinations of the solar ultra violet rays.

The author has had the opportunity of ascertaining the hypothesis in forecasting the weather type in this year 1941.

According to the experiments, the extinction coefficients were found denoting the poor type with numerical values comparatively small, in mean 0.0099, and standard deviation $\pm 0.00919$, and the features of the coefficients with the configurations continually decreasing. Therefore, the experiments and observations of harverts were found fairly supporting the hypothesis.

The author asserts the importance of studying the amount of ultra violet rays and of observations for meteorological factors in the northern part of Japan for the purpose of further testing the validity of the hypothesis and establishing the scientific foundations of agricultural and fishery practices.

## Literature.

(1) T. Hanzawa: J. Agric. Chem Soc., Japan, **6**, 1993 (1930).
(2) T. Hanzawa; Ibid., 644 (1935).

## Synthesis of Bios by Aspergilli.



By Nobusada Okoti.

(Agricultural-chemical Laboratory, Faculty of Agriculture, Tokyo Imperial University;
Received Nov. 11, 1941.)

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## Untersuchungen über das sogenannte „Gluconobacter." VI. Mitteilung.

Über das sogenannte „Eugluconofacter"



Von Teijirô Uyemura, Keiji Kondô, und Reizirô Kodama

(Wissenschaftl Laboratorium von Ch. Takeda u. Co. Ltd., Osaka.
Eingegangen am 26. 11. 1941.)

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## Biochemical Studies of "Bakanae" Fungus. Part 14.

Effect of Gibberellin A on Tissue Culture.



By T. Yabuta and Y. Sumiki.

(Tokyo Imperial University; Received December 20, 1941.)

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## Studies on Ascorbic Acid. VI.

The Relation between Ascorbic Acid and Thiamin. II.



By Kichinosuke Fujimura.

(Laboratory of Nutritional Chemistry, Dept. of Agricultural and Chemical Institute, Kyoto Imperial University;
Received October 14, 1941.)

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## On the Manufacture of Artificial Fibres from Proteins. (Part I).

On the Artificial Fibres of Peanut Protein.



By Masami Oku and Yutaka Hosokawa.

(From the Chemical Fibre Laboratory, Ueda Imperial College of Sericulture and Silk Industry; Received December 11, 1941.)

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